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Francis C. Hand, Esq.
c/o Carella, Byrne, Bain, Gilfillan, Cecchi,
Stewart & Olstein
6 Becker Farm Road
Roseland, NJ 07068

EXAMINER

SHARMA, RASHMI K

ART UNIT

PAPER NUMBER

3651

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference numeral 24. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the paddle frame must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended

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replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Harrison (US Patent number 5,744,186).

Harrison discloses a hopper (2) for supplying loose fill material (1), one housing (outer walls of screw conveyor 3) having an inlet (area under hopper 2 in Figure 1) in

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communication with the hopper (2) to receive a flow of material (1) and an outlet (7 leading into 15 in Figure 1) for discharging the received material (1), a screw (3) having a plurality of flights, the screw (3) rotatably mounted in the housing for conveying the material (1) received through the inlet towards the outlet, a steam chamber (6) in communication with the outlet of the housing to receive the material therefrom, a paddle frame (structure which rotates paddles 17 and the horizontal shaft within chamber 6 in Figure 1) rotatably mounted in the chamber (6) to rotate about a central axis, the paddle frame having at least one scoop (17) mounted on a periphery thereof and extending longitudinally thereof in spaced parallel relation to the central axis, the scoop (17) being disposed in spaced relation to the outlet of the housing for scooping material delivered into the steam chamber (6) peripherally of the steam chamber (6), wherein the paddle frame has a pair of scoops (17) disposed on diametrically opposite sides thereof and the paddle frame being L-shaped (Figure 1, any one paddle 17 and the horizontal portion of the shaft).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison (US Patent number 5,744,186) in view of Whiteman (US Patent number 4,328,913).

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Harrison as disclosed above fails to show a screw having some flights having a smaller radius than the remainder of the flights.

Whiteman does disclose a screw having some flights having a smaller radius than the remainder of the flights (see Figures 2 and 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harrison's flight radii in the area under the hopper, as taught by Whiteman in order to provide for a varied and/or more finely process of separating of the material coming out of the hopper to be conveyed.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison (US Patent number 5,744,186) in view of Trotter (US 3,702,128) and Martin (US Patent number 3,041,185).

Harrison as disclosed above fails to show a pair of hoppers, a pair of housings and a pair of screws.

Martin does disclose a pair of hoppers (60).

Trotter does disclose a pair of screws.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add pairs of hoppers and screws to Harrison's invention as taught by Martin and Trotter in order to provide for double the amount of material processed and conveyed. It also would have been obvious to provide for a pair of housings in which to house each screw conveyor for each respective hopper since simply doubling the invention side by side would essentially require separate housings as well.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison (US Patent number 5,744,186) in view of Trotter (US 3,702,128) and Martin (US Patent number 3,041,185) and Whiteman (US Patent number 4,328,913).

Harrison as modified by Trotter and Martin above, fail to show a screw having some flights having a smaller radius than the remainder of the flights.

Whiteman does disclose a screw having some flights having a smaller radius than the remainder of the flights (see Figures 2 and 3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Harrison's flight radii in the area under the hopper, as taught by Whiteman in order to provide for a varied and/or more finely process of separating of the material coming out of the hopper to be conveyed.

Allowable Subject Matter

Claims 9-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Dependent claims 9 and 13 recite the structural limitation of a steam expander comprising a paddle frame having a skeletal construction including a central rotatable shaft, a pair of plates secured coaxially to and along said shaft and a pair of paddles secured to and between said plates to agitate and move loose fill material delivered into

said steam chamber, in combination with the rest of the recited structure, clearly defines over the prior art.

Response to Arguments

Applicant's arguments filed 4/21/06 have been fully considered but they are not persuasive.

Applicant argues that Harrison fails to show the conditioner expanding the mash passing through it and at least one hopper for supplying expandable loose fill material. However, the hopper (2) is clearly shown in figure 1 and column 4 line 41, and steam chamber (conditioner 6) is considered to inherently expand any type of mash passing therethrough.

Applicant expresses their confusion regarding the central axis of the paddle frame running into and out of the page in figure 1. For clarity, it should be understood that this statement was made, if the paddles were rotating about the horizontal shaft of chamber 6 in a non-axial manner. In other words, actually rotating about the length of the shaft. It should also be noted that if the paddles are rotated in an axial manner about the horizontal shaft, that this configuration would also meet Applicant's claim limitations.

Applicants also argue that Harrison fails to show "at least one scoop mounted on a periphery thereof and extending longitudinally thereof in spaced parallel relation to said central axis". However, as can be seen in Figure 1, paddles and/or scoops (17) are each clearly situated along the periphery of the horizontal shaft (or central axis) of

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chamber (6) and each paddle and/or scoop (17) has a longitudinal extent along the periphery of the horizontal shaft, thereby meeting Applicant's claim limitations. The definition according to Merriam-Webster's Collegiate Dictionary 10th Edition being used for the term "scoop" is as follows: *the action of scooping*.

Applicant argues that "a rotatable shaft cannot constitute a paddle frame". However, the Examiner disagrees. It should be noted that the Examiner is relying upon the shaft as well as the paddles and the chamber (6) itself in referencing "a paddle frame". The Applicant fails to include or further claim any structure whatsoever within the claim language towards "a paddle frame", so why can't just a rotatable shaft constitute a paddle frame? According the scope of what Applicant's have structurally claimed, any one (or more) structure(s) can indeed meet this claim limitation.

Since Applicant argues that "it cannot be seen how the one paddle and the horizontal shaft can be mounted on a periphery of a paddle frame", Applicant is asked to specifically point out exactly what one structure and reference numeral in the drawings denotes the paddle frame, since Applicant has failed to expressly disclose this structure in the drawings. Even in Applicant's drawings, it appears as though no one structure is capable of meeting "a paddle frame" and therefore does not meet Applicant's own claim language interpretation.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rashmi K. Sharma whose telephone number is 571-272-6918. The examiner can normally be reached on Monday-Thursday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER